2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

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National report on the implementation of actions 5, 20, and 21 of the action plan of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

Report submitted by the United Kingdom of Great Britain and Northern Ireland

1. As provided in the action plan of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, the Governments of the five nuclear-weapon States, or P5, are working to implement action 5 to "further enhance transparency and increase mutual confidence" and to make national reports on our action 5 and other undertakings to the 2014 Treaty Preparatory Committee under a common framework, consistent with actions 20 and 21.

2. Action 21 states: "As a confidence-building measure, all the nuclear-weapon States are encouraged to agree as soon as possible on a standard reporting form and to determine appropriate reporting intervals for the purpose of voluntarily providing standard information without prejudice to national security". The framework we use for our national reports includes common categories of topics under which relevant information is reported, and it addresses all three pillars of the Treaty: disarmament, non-proliferation, and peaceful uses of nuclear energy.

3. We encourage all States parties, consistent with action 20, to make similar reports.

Key statements

4. The United Kingdom is committed to a world without nuclear weapons in line with our obligations under article VI of the Treaty and firmly believes that the best way to achieve this goal is through gradual disarmament negotiated using a step-by-step approach and within the framework of the United Nations disarmament machinery and the Treaty on the Non-Proliferation of Nuclear Weapons.

5. We believe that the Treaty should remain the cornerstone of the international nuclear non-proliferation regime and the essential foundation for the pursuit of nuclear disarmament and for peaceful uses of nuclear energy.

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6. We see entry into force of the Comprehensive Nuclear-Test-Ban Treaty and completion of its verification regime; the start and early conclusion of negotiations on a Fissile Material Cut-Off Treaty in the Conference on Disarmament; and universality of the Treaty on the Non-Proliferation of Nuclear Weapons as essential steps on the road to complete global nuclear disarmament.

7. We remain determined to continue to work with partners across the international community to prevent proliferation and to make progress on multilateral nuclear disarmament, to build trust and confidence between nuclear and non-nuclear weapon States, and to take tangible steps towards a safer and more stable world, in which countries with nuclear weapons feel able to relinquish them.

8. The United Kingdom has a strong record on nuclear disarmament. We have steadily reduced the size of our own nuclear forces by well over 50 per cent since our Cold War peak and since 1998 all of our air-delivered nuclear weapons have been withdrawn and dismantled.

9. Our nuclear forces peaked in the late 1970s, with a total of about 460 warheads of varying types and delivery systems. In May 2010, we announced that this figure would continue to reduce to a total stockpile of no more than 180 warheads by the mid-2020s.

10. We now have just one delivery system provided by four ballistic missile submarines and we have cut the number of nuclear warheads onboard each deployed Vanguard class submarine from 48 to 40, while reducing the number of operational (Trident) missiles on each submarine to no more than 8. These changes have now been completed across the ballistic missile submarine fleet. We have now achieved our 2010 Strategic Defence and Security Review commitment to reduce the number of operationally available warheads to no more than 120.

11. Maintaining and renewing elements of the United Kingdom's nuclear deterrent capability, such as the submarine, is fully consistent with our international obligations under the Treaty on the Non-Proliferation of Nuclear Weapons. That Treaty does not prohibit the maintenance of nuclear-weapon systems currently held by the nuclear-weapon States and the Treaty on the Non-Proliferation of Nuclear Weapons does not set out any timetable for the fulfilment of article VI of the Treaty. As long as the global security environment makes it necessary for the United Kingdom to retain nuclear weapons, we have a responsibility to maintain the safety and reliability of all elements of the capability, including through replacement and updating of obsolete elements of the system as they reach the end of their operational life.

12. We strongly welcome the New Strategic Arms Reduction Treaty (START) between the United States and Russia, ratified in 2011, which will impose limits for each party of 1,550 deployed strategic offensive warheads from February 2018. However, there is still more to be done. We encourage all States with nuclear weapons to continue their efforts to reduce the size of the nuclear arsenals, but especially those with the largest numbers.

13. The nuclear posture of the North Atlantic Treaty Organization (NATO), in which deterrence is shared but the nuclear powers maintain full custody of their nuclear weapons, fully conforms with articles I and II of the Treaty on the Non-Proliferation of Nuclear Weapons which prohibit the transfer of control of nuclear weapons to non-nuclear weapons States. The United Kingdom and the

United States are both fully committed to their obligations under the Treaty on the Non-Proliferation of Nuclear Weapons, including those relating to disarmament under article VI, as indeed are all NATO Allies.

14. We initiated the P5 process in 2009 to build mutual understanding between the nuclear-weapon States. We do not always see eye to eye on all issues but we are working hard to increase mutual trust and transparency as these are essential prerequisites to further more ambitious steps. We urge all States that have not yet done so, to join the Treaty on the Non-Proliferation of Nuclear Weapons as non-nuclear weapons States.

15. We will continue to try to make nuclear weapons less necessary, with the goal of making them unnecessary. However, the United Kingdom will retain a credible, continuous and effective minimum nuclear deterrent for as long as the global security situation makes it necessary. As set out in the Strategic Defence and Security Review in 2010, we consider that our nuclear deterrent is the ultimate means to deter the most extreme threats.

I. Reporting on national measures relating to disarmament

16. The United Kingdom considers the Treaty on the Non-Proliferation of Nuclear Weapons to be the cornerstone of global efforts to achieve a world free of nuclear weapons and we are committed to the step-by-step process agreed by consensus at the 2000 Review Conference and reaffirmed at the 2010 Review Conference.

National security policies, doctrine, and activities associated with nuclear weapons

Nuclear doctrine

17. The 2006 white paper "The Future of the United Kingdom's Nuclear Deterrent",[1] as amended by the 2010 Strategic Defence and Security Review,[2] provides our current policy on nuclear deterrence, our capability and force structure. It makes clear that we will maintain only the minimum credible nuclear deterrent, under full political control, in the form of continuous-at-sea patrols by Vanguard-class submarines carrying Trident ballistic missiles with the fewest warheads since the introduction of our fleet of ballistic missile submarines capability in the 1960s.

18. We believe we already have the smallest stockpile of nuclear warheads among the recognized nuclear-weapons States, and remain the only P5 nation to have reduced to a single deterrent system comprised of four fleet of ballistic missile submarines, since the withdrawal of our air component in the late 1990s.

19. The United Kingdom shares the concern regarding the humanitarian consequences which could result from the use of nuclear weapons. The United Kingdom works extremely hard to prevent the use of nuclear weapons; to prevent the proliferation of nuclear weapons; and to ensure our own nuclear weapons are safe and secure.

[1] The Future-of-the United Kingdoms Nuclear Deterrent: Defence White Paper-2006.

[2] The Strategic Defence and Security Review: Securing Britain in an Age of Uncertainty.

Trident Alternatives Review

20. In the 2010 Strategic Defence and Security Review,[3] the Government confirmed its commitment to maintaining a continuous submarine-based deterrent and to beginning the work of replacing its existing submarines. As part of the Coalition Programme for Government,[4] it was agreed that the Liberal Democrats would continue to make the case for alternatives. As a result, in 2011 the Prime Minister and Deputy Prime Minister jointly commissioned a focused review into alternative systems and postures.

21. The review was a neutral, factual review of options to examine whether there are:

- Credible alternatives to a submarine-based deterrent
- Credible submarine-based alternatives to the current proposal
- Alternative nuclear postures

22. The United Kingdom Government policy remains as set out in the Strategic Defence and Security Review. We will maintain a continuous deterrent and are proceeding with the programme to build a new fleet of ballistic missile submarines. Final decisions on the successor submarines will be taken in 2016 at the Main Gate point of the acquisition programme.

Operational policy

23. The United Kingdom has long been clear that we would only consider using our nuclear weapons in extreme circumstances of self-defence, including the defence of our NATO Allies. While we remain deliberately ambiguous about precisely when, how and at what scale we would contemplate their use, we have provided some parameters.

24. In the 2010 Strategic Defence and Security Review, the United Kingdom strengthened its negative security assurance to state that the United Kingdom will not use or threaten to use nuclear weapons against non-nuclear-weapon States party to the Treaty on the Non-Proliferation of Nuclear Weapons. In giving this assurance, we emphasized the need for universal adherence to and compliance with the Treaty, and noted that this assurance would not apply to any State in material breach of those non-proliferation obligations. We also noted that while there is currently no direct threat to the United Kingdom or its vital interests from States developing capabilities in other weapons of mass destruction, for example chemical and biological, we reserve the right to review this assurance if the future threat, development and proliferation of these weapons make it necessary.

25. In the interests of international security and stability, the United Kingdom has taken steps to lower the operational status of our deterrent system. United Kingdom nuclear weapons are not on high alert, nor are they on "launch on warning" status. The patrol submarine operates routinely at a "notice to fire" measured in days rather than minutes as it did throughout the Cold War. The missiles are no longer targeted at any country. On 15 February 1994, a Joint Declaration by the President of the Russian Federation [Boris Yeltsin] and the Prime Minister of the United Kingdom of

[3] 2010 Strategic Defence and Security Review.

[4] Coalition Programme for Government.

Great Britain and Northern Ireland [John Major] [declared that they would] "ensure the adoption of all necessary measures so that the strategic nuclear missiles under their respective commands will be de-targeted not later than 30 May 1994". This position was considered and reaffirmed during the work in the 2006 White Paper. We believe that a nuclear attack on the United Kingdom's vital interests is deterred by demonstrating our capability to respond under any circumstances, rather than just by the ability for a rapid response. There is no immediacy of launch in our normal operating posture.

26. The security and safety of our nuclear weapons is given the very highest priority and is entirely consistent with our obligations under non-proliferation agreements. Robust arrangements are in place for the political control of United Kingdom's strategic nuclear deterrent. There are a number of technological and procedural safeguards built into the United Kingdom's nuclear deterrent to prevent an unauthorized launch of its Trident missiles.

27. Finally, the United Kingdom has maintained a voluntary moratorium on nuclear-weapon test explosions since 1991.

Nuclear weapons, nuclear arms control (including nuclear disarmament) and verification

Stockpile size

28. The United Kingdom has achieved substantial reductions in its nuclear-weapon stockpile. In the late 1970s, when the United Kingdom's stockpile was at its highest, the United Kingdom had more than 400 warheads in-service across five types. Following the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, the United Kingdom announced in the 2010 Strategic Defence and Security Review that the number of deployed warheads on each submarine would be reduced from 48 to 40; the number of operational missiles in the Vanguard-class ballistic missile submarines would be reduced to no more than 8; and we would reduce the number of operationally available warheads from fewer than 160 to no more than 120.

29. On 20 January 2015, in a written statement delivered to Parliament, the Secretary of State for Defence (Michael Fallon) announced that the United Kingdom Government had now met their commitment to implement these changes across the United Kingdom ballistic missile submarine fleets. All Vanguard-class ballistic missile submarine fleets on continuous at-sea deterrent patrol now carry 40 nuclear warheads and no more than 8 operational missiles. We have therefore achieved our commitment to reduce the number of operationally available warheads to no more than 120 [All nuclear material no longer deemed necessary for military purposes has been placed under safeguards of international civil standards].

Verification

30. Developing and agreeing effective measures for verifying the dismantlement of nuclear warheads will be an important precondition for fulfilling the goals of article VI of the Treaty. The United Kingdom-Norway Initiative is an example of the world-leading research the United Kingdom is undertaking to address some of the technical and procedural challenges posed by effective verification of warhead dismantlement. In 2007, representatives from several Norwegian laboratories, the

United Kingdom Ministry of Defence, the United Kingdom Atomic Weapons Establishment the Verification Research Training and Information Centre, a non-governmental organization, met to discuss potential cooperation on matters connected with technical verification of nuclear-arms reductions, with an agreement that a programme of work in this field should be progressed. This was the first time that a nuclear-weapon State, a non-nuclear weapon State, and an independent non-governmental organization have collaborated in this field of research. In 2012, the United Kingdom hosted a P5 expert-level meeting on verification to discuss lessons learned from the United Kingdom-Norway Initiative to date.

31. We are in our second decade of an active partnership with the United States of America in monitoring and verification research. Our joint technical cooperation programme allows us to apply policy, technology and programme expertise to develop and evaluate targeted approaches for transparent reductions and monitoring of nuclear warheads, fissile material and associated facilities for potential disarmament and non-proliferation initiatives. Technical experts conduct activities and share information to explore and address essential and difficult monitoring and verification challenges, working to integrate potential approaches for arms control monitoring and transparency.

32. The United Kingdom and China have conducted reciprocal technical exchange visits and will continue to explore collaborative exchanges into arms control and verification research. The United Kingdom has also offered the other P5 nations the opportunity to visit some aspects of the facilities available at the United Kingdom Atomic Weapons Establishment.

Transparency and confidence-building measures

33. Through the Strategic Defence and Security Review and other documents, the United Kingdom has voluntarily declared its maximum warhead stockpile numbers and operational warhead numbers.

34. We have also expressed our unconditional support for the 2010 action plan at numerous forums. In line with this support, the United Kingdom actively participates in regular working-level meetings of the P5 nuclear-weapon States that advance our collective dialogue on disarmament and review progress towards fulfilling the commitments made at the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons. The United Kingdom held the first P5 Conference in 2009, and started the second cycle of Conferences in February 2015.

35. The United Kingdom actively promotes its work on the United Kingdom-Norway Initiative to non-nuclear-weapon States. This has included hosting a joint United Kingdom-Norway workshop for 12 non-nuclear-weapon States in December 2011 and side events at the 2010 Review Conference of the Parties to the Treaty and the 2012 and 2013 Preparatory Committees. Another side event was held at the 2014 Preparatory Committee.

Nuclear glossary

36. The P5 are, under China's leadership, developing a glossary of nuclear terms to aid understanding between States in discussing related matters. The United

Kingdom has strongly supported the authoring of this glossary and looks forward to using this multilingual handbook in future work.

International agreements

37. The United Kingdom has signed a number of bilateral agreements as confidence-building measures with P5 partners. In addition to those mentioned previously, in 1977, the United Kingdom signed an agreement with the Union of Soviet Socialist Republics on the prevention of accidental nuclear war, and establishment of a direct communication link between the residence of the Prime Minister of the United Kingdom, and the Kremlin, in 1967.

38. At the France-United Kingdom Summit in November 2010, as part of the Defence and Security Cooperation Treaty, a subordinate treaty was declared, namely the Teutates Treaty. As part of the treaty, both the United Kingdom and France agreed to build and jointly operate radiographic and hydrodynamic testing facilities, reaffirming their rights and obligations under the Treaty on the Non-Proliferation of Nuclear Weapons, and their commitments under the Comprehensive Nuclear-Test-Ban Treaty. It was agreed that through the Treaty, the United Kingdom and France would cooperate and share information on safety and security of nuclear weapons; stockpile certification; and counter nuclear or radiological terrorism.[5]

Non-civil nuclear material

39. The United Kingdom takes nuclear security most seriously and applies the same rigour to enforcing compliance to prevent the theft or sabotage of non-civil nuclear materials as it does to the civil nuclear industry. At defence sites, the Ministry of Defence Police and the Armed Forces performs an equivalent role to the Civil Nuclear Constabulary in the stringent enforcement of nuclear security standards. Non-civil site security is at least as robust as the protection of civil material, and is in line with guidance such as the International Atomic Energy Agency Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5). The United Kingdom works closely with international partners to ensure the application of common international security standards, for example through reciprocal peer reviews of security and best practice exchanges.

Other related issues

Comprehensive Nuclear-Test-Ban Treaty

40. The United Kingdom recognizes the Comprehensive Nuclear-Test-Ban Treaty as a key element of the global disarmament and non-proliferation architecture, and provides extensive technical and political support to the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization. The United Kingdom maintains the United Kingdom National Data Centre, Eskdalemuir Seismometer Array, a number of other International Monitoring Systems stations throughout United Kingdom territories and 1 of 16 global radionuclide laboratories that provide analytical support to the International Monitoring Systems. These facilities are

[5] Treaty between the United Kingdom of Great Britain and Northern Ireland and the French Republic relating to Joint Radiographic/Hydrodynamics Facilities. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228571/7975.pdf.

backed up by enduring research in a number of areas, notably through the Atomic Weapons Establishment's Forensic Seismology Team. In addition, the United Kingdom was heavily involved in preparations for Integrated Field Exercise 2014, which evaluated the Comprehensive Nuclear-Test-Ban Treaty Organization's On-Site Inspection capability.

41. The United Kingdom is active in the Comprehensive Nuclear-Test-Ban Treaty Organization's Working Groups in Vienna and has provided over £100,000 in support over the past five years for the finance-focused Advisory Group. Our work ensures that the Comprehensive Nuclear-Test-Ban Treaty Organization has the necessary funding and working time to build and maintain an effective monitoring regime.

Treaty Banning the Production of Fissile Material for Nuclear Weapons and Other Nuclear Explosive Devices

42. Since the 1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, the United Kingdom has upheld a moratorium on the production of fissile material for use in nuclear weapons or other nuclear explosive devices. Since then, all enrichment and reprocessing in the United Kingdom has been conducted under international safeguards. We are committed to the pursuit of an international treaty that would put an end to the future production of fissile material for such purposes. We made a commitment in the action plan of the 2010 Review Conference to begin negotiation within the Conference on Disarmament of a treaty banning the production of fissile material for use in nuclear weapons or other nuclear explosive devices.

43. The United Kingdom supported the resolution in the First Committee of the General Assembly in 2012 to create a fissile material cut-off treaty Group of Government Experts. The Group, in which we are pleased to have a United Kingdom expert participating, complements existing efforts to find a positive way forward on the treaty in the Conference on Disarmament. We believe that the three sessions of the Group of Government Experts have made a strong and constructive contribution to the process and we look forward to the final report.

Reporting on national measures relating to non-proliferation

Safeguards

44. All civil nuclear material in the United Kingdom is subject to the European Atomic Energy Community (Euratom) safeguards and to the terms of the United Kingdom/Euratom/IAEA tripartite safeguards agreement under the Treaty on the Non-Proliferation of Nuclear Weapons. Euratom safeguards obligations stem from chapter VII (articles 77-85) of the Treaty establishing the European Atomic Energy Community,[6] which requires the European Commission, inter alia, to satisfy itself that nuclear materials are not diverted from their intended uses as declared by users. This is achieved through:

- A requirement that all operators of nuclear installations provide the Commission with Basic Technical Characteristics describing the location and intended activities of their installation

[6] http://eur-lex.europa.eu/en/treaties/dat/12006A/12006A.htm.

- A requirement that operators keep and report nuclear material accountancy records
- Provision for the Commission to inspect installations and records
- Provision for the imposition of sanctions by the Commission in the event of infringement of the Treaty safeguards obligations. These sanctions can range from a published written warning to withdrawal of the nuclear material concerned.

45. The various reporting requirements are amplified in Commission Regulation (Euratom) 302/05.[7] Euratom safeguards do not apply to nuclear material intended to meet defence requirements.

Voluntary Offer Safeguards Agreement

46. The United Kingdom Voluntary Offer Safeguards Agreement[8] with the IAEA and Euratom came into force in 1978. The agreement allows for the application of safeguards on all source or special fissionable material in facilities or parts thereof within the United Kingdom, subject to exclusions for national security reasons only. Nuclear materials accountancy reports on all civil nuclear material in facilities are provided to the IAEA by Euratom, and the IAEA may "designate" any facility, or part thereof, for inspection. Currently, some of the plutonium stores at Sellafield and the gas centrifuge enrichment facilities at Capenhurst are designated for IAEA inspection. The agreement gives the United Kingdom the right to remove facilities and/or withdraw nuclear material from the scope of the agreement for reasons of national security. However, as part of the 1998 Strategic Defence Review, the United Kingdom agreed that any future withdrawals from safeguards would "be limited to small quantities of nuclear materials not suitable for explosive purposes" and undertook to publish information on any such withdrawals.[9]

Additional Protocol

47. The United Kingdom Additional Protocol[10] to the Voluntary Offer Safeguards Agreement is based on the model agreement (INFCIRC/540 and Corr.1), and contains measures aimed at the primary objectives of Additional Protocols — to increase the capability of IAEA to detect any undeclared nuclear material and activities in non-nuclear-weapon States or to increase the efficiency of IAEA safeguards. Information, and associated access, is therefore provided on all Protocol-relevant activities that are done in collaboration with or are otherwise relevant to a non-nuclear-weapon State, or where the information would improve the effectiveness or efficiency of IAEA safeguards in the United Kingdom.

Export controls

Security Council resolution 1540 (2004)

48. The United Kingdom has worked hard to fully implement Security Council resolution 1540 (2004) since its unanimous adoption in 2004. As one of the vice-

[7] http://eur-lex.europa.eu/LexUriServ/site/en/oj/2005/l_054/l_05420050228en00010070.pdf.

[8] http://www.iaea.org/Publications/Documents/Infcircs/Others/infcirc263.pdf.

[9] http://www.hse.gov.uk/nuclear/safeguards/withdrawals.htm.

[10] http://www.iaea.org/Publications/Documents/Infcircs/2005/infcirc263a1.pdf.

chairs of the Committee adopted pursuant to resolution 1540 (2004), the United Kingdom works with States Members of the United Nations to strengthen efforts to promote universal implementation of the resolution. We work with and through international organizations and initiatives, including the IAEA and the G8 Global Partnership, to provide technical and financial support to deliver concrete improvements in the security of materials, knowledge and know-how in partner countries; facilitate debate and deliver training to help build partners' engagement and capacities; and maintain domestic technical and scientific expertise in counter proliferation, arms control and chemical, biological and nuclear security. United Kingdom export controls and enforcement capability enable us to maintain a robust and effective national export control regime, and to strengthen international export controls.

Nuclear Suppliers Group

49. By fulfilling its obligations under the Nuclear Suppliers Group and the Zangger Committee, the United Kingdom contributes to minimizing nuclear proliferation while ensuring that eligible States are able to access nuclear technology for peaceful uses. The United Kingdom implements effective strategic export controls in regard to its nuclear transfers in line with the Nuclear Suppliers Group and Zangger Committee control lists. Relevant exports are assessed against the Consolidated European Union and National Arms Export Licensing Criteria and stated United Kingdom Government export control policies. A robust enforcement system, underpinned by Export Control Order 2008,[11] operates to deter attempts to breach the controls and help to facilitate legitimate transfers.

50. The United Kingdom also actively supports the work of the Nuclear Suppliers Group and Zangger Committee. The United Kingdom contributed extensive technical expertise to the recent Nuclear Suppliers Group three-year-long fundamental review of its control lists, and continues this through the newly established Technical Experts Group, ensuring that the Nuclear Suppliers Group control lists reflect changing proliferation threats. We also share licensing and enforcement information with fellow participating Governments, both ad hoc and at the Licensing and Enforcement and Information Exchange Meetings.

51. In 2013 the United Kingdom authored a paper entitled "Good practices for corporate standards to support the efforts of the international community in the non-proliferation of weapons of mass destruction". It was agreed at the 31st Consultative Group meeting and posted on the Nuclear Suppliers Group public website shortly thereafter. The paper recognizes the important role that the diverse commercial sector can play in assisting multilateral efforts in non-proliferation of weapons of mass destruction. The United Kingdom has supported Nuclear Suppliers Group outreach activities with emerging technology holders.

Nuclear security

52. The United Kingdom security regime for the civil nuclear industry is robust and effective and fully meets international standards. Security arrangements are based on the principles of the graded approach and defence in depth and are kept under constant review.

[11] https://www.gov.uk/export-control-order-2008.

53. In 2010 the United Kingdom deposited its instruments of ratification of the 2005 Amendment to the Convention on the Physical Protection of Nuclear Material. Although the 2005 amendment has not yet entered into force, the United Kingdom has in place legislation which implements it.

54. In 2013 the United Kingdom extended the scope of its security regulation to cover civil nuclear sites under construction in order to take account of the United Kingdom's new nuclear build programme. The legislation had previously regulated operating civil nuclear sites. Revised guidance was issued to the industry by the United Kingdom's nuclear regulator, the Office for Nuclear Regulation, in October 2012, which is a key step towards an increasingly more outcome-focused regulatory regime for security in the civil nuclear industry. By the end of January 2014 all nuclear premises regulated by the Office for Nuclear Regulation Civil Nuclear Security had National Objectives Requirements Model Standards compliant approved Nuclear Site Security Plans.

55. Following on from pledges at the 2010 Washington and 2012 Seoul Nuclear Security Summits, at the 2014 Nuclear Security Summit at The Hague, the United Kingdom made a number of commitments to continue tackling the threat of nuclear terrorism, including:

- Continuing our Global Threat Reduction Programme of financial and expert assistance for nuclear and radiological security improvements overseas. Since 2010, our experts have assisted more than 20 countries, embedding high standards worldwide
- Contributing £3.4 million to the IAEA Nuclear Security Fund in 2014, bringing the total United Kingdom contribution since 2010 to more than £12 million
- Contributing £500,000 to Interpol's Operation Fail Safe to track the movements of individuals involved in the illicit trafficking of radioactive or nuclear material

Nuclear information security

56. The United Kingdom has promoted the need to secure sensitive nuclear information within the framework of the Nuclear Security Summit, the Global Partnership and the IAEA.

Key attributes of an excellent nuclear security culture

57. In 2012 the United Kingdom established a tripartite sub-group (with representatives from the regulator, industry and government) to develop a better understanding of the attributes of an excellent security culture, and for this to be captured and codified. The output of this work is a guidance document[12] which was published in June 2013. The guide sets out key attributes deemed necessary for an excellent security culture and then sets out for each one what is required to achieve this. The implementation of the recommendations in the guide is not compulsory, but is intended to inform and enhance understanding of how all parties (regulator, industry and government) can deliver to meet the objective.

[12] https://www.nuclear.nsacademy.co.uk/system/files/0034%20Spooner%20Security%20Culture%20Leaflet.pdf.

International Physical Protection Advisory Service

58. The United Kingdom was the first nuclear-weapon State to welcome an International Physical Protection Advisory Service mission. A Mission Team visited the Sellafield civil nuclear site and Barrow port in October 2011, and concluded that the state of civil nuclear security is robust. The team identified many examples of good practice within the civil nuclear security regime and made a number of valuable recommendations. In March 2014 the United Kingdom Government invited the IAEA to send a follow-up International Physical Protection Advisory Service mission to the United Kingdom, which was planned to take place in 2016. The United Kingdom provides security experts who participate in a number of outward International Physical Protection Advisory Service missions.

Nuclear-weapon-free zones

59. The United Kingdom continues to support the principle of nuclear-weapon-free zones. As previously stated in 1995 and 2010, we recognize the role that negative security assurances can play in strengthening the non-proliferation regime and enhancing regional and international security.

Existing zones

60. To date, the United Kingdom has signed and ratified Protocols to the Treaty of Tlatelolco (Latin America and the Caribbean), the Treaty of Rarotonga (South Pacific), and the Treaty of Pelindaba (Africa). There are 74 States, therefore, that already have in place protocols that provide legally binding negative security assurances from the United Kingdom. We also support the parallel political declarations adopted by the Nuclear-weapon States and Mongolia concerning that country's nuclear-weapon-free status.

Central Asia Nuclear-Weapon-Free Zone

61. We will continue to pursue signing protocols to existing nuclear-weapon-free zones as a practical way of strengthening our existing negative security assurances. The United Kingdom therefore welcomed the signing by the nuclear-weapon States of a Protocol to the Treaty on a Nuclear-Weapon-Free Zone in Central Asia in May 2014. Under this Protocol, the nuclear-weapon States will extend legally binding assurances not to use or threaten to use nuclear weapons against any State party to that Treaty and not to contribute to any act that constitutes a violation of that Treaty or its Protocol. The United Kingdom has now completed its ratification of the Protocol.

Southeast Asia Nuclear-Weapon-Free Zone

62. In conjunction with other nuclear-weapon States, the United Kingdom will continue to engage with the State parties to the Treaty on the Southeast Asia Nuclear-Weapon-Free Zone in order to allow signature of a Protocol to that Treaty in the near future.

Middle East weapons-of-mass-destruction-free zone

63. The United Kingdom reiterates its commitment to the implementation of the resolution on the Middle East adopted at the 1995 Review and Extension

Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons and, as one of the sponsors of the text of that resolution, is working hard to deliver against the practical steps agreed in 2010. As well as the considerable time and effort of officials, the United Kingdom Government has also provided financial support: in 2013/14 the United Kingdom gave £100,000 towards the Facilitator's office, and has committed a further £100,000 in 2014/15. We look forward to convening an inclusive conference on the establishment of a Middle East zone free of nuclear weapons and all other weapons of mass destruction as soon as the practical arrangements for that conference are agreed by the States of the region. We will continue to work with all the States of the region, our fellow Co-conveners and the Facilitator, Ambassador Jaakko Laajava, to encourage progress towards this common goal.

Compliance and other related issues/concerns

Democratic People's Republic of Korea

64. The United Kingdom has been fully supportive of all Security Council resolutions relating to the Democratic People's Republic of Korea and of the Presidential Statement of 16 April 2012, made in the wake of the satellite launch of 13 April 2012. We continue to support the United Nations Democratic People's Republic of Korea Panel of Experts in their work, and have reported violations of Democratic People's Republic of Korea sanctions to the Panel. Our work to raise awareness of existing Democratic People's Republic of Korea sanctions and to encourage implementation is ongoing. The United Kingdom has funded the International Institute of Strategic Studies to run workshops in partnership with the Panel of Experts to raise awareness of Democratic People's Republic of Korea sanctions and encourage implementation in both the public and private sector. In 2013 workshops were held in sub-Saharan Africa, the Middle East and Hong Kong. We plan to continue this work.

65. The United Kingdom is not a member of the Six-Party Talks, nor are we seeking involvement in discussions. However, given the risk of the Democratic People's Republic of Korea's nuclear programme to international security, we are maintaining close contact with all sides. We have made clear to the Democratic People's Republic of Korea that if it carries out any further provocations, the international community will respond robustly. However, we have also been clear that if the Democratic People's Republic of Korea takes concrete steps to resolve the nuclear issue, there will be a positive response.

Other contributions to nuclear-weapons non-proliferation

The Islamic Republic of Iran

66. The United Kingdom remains concerned about the nature of Iran's nuclear programme. However, we are committed to finding a diplomatic solution to the Iranian nuclear issue. The United Kingdom has adopted a dual track strategy of pressure and engagement. We have supported six Security Council resolutions which prohibit Iran from all reprocessing, heavy water and enrichment-related activity, most recently resolution 1929 (2010), adopted in June 2010. We continue to call on Iran to fully comply with its obligations under Security Council resolutions s, and to call on all States Members of the United Nations to implement Security Council resolutions fully. We actively support the work of the United Nations Iran

Panel of Experts. We have also implemented European Union sanctions on Iran which go beyond these measures. In addition, the United Kingdom has played an active role in P5+1 negotiations with Iran and we welcome the extension of the Joint Plan of Action between the E3+3 and Iran in November 2014, as well as Iran's substantive engagement in talks to reach a Comprehensive Agreement.

67. The United Kingdom shares the IAEA's "serious concerns" about the possible military dimensions to Iran's nuclear programme owing to the credible information available to it which indicates that Iran had carried out activities "relevant to the development of a nuclear device". As a member of the IAEA Board of Governors, the United Kingdom supported two IAEA Board resolutions in 2011 and 2012 which stress that it is essential for Iran and the Agency to intensify their dialogue to resolve all outstanding substantive issues. We continue to support the IAEA in its tireless efforts to address these issues. We welcome the agreement of a Joint Statement on a Framework for cooperation between Iran and the Agency in November 2013, in which Iran agreed to resolve all outstanding issues with the Agency. We are, however, disappointed with the lack of progress made owing to Iran's unwillingness to cooperate fully. We continue to call on Iran to address fully the substance of all of the Agency's outstanding concerns including by granting access to all sites, equipment, persons and documents requested.

68. The United Kingdom is committed to successful negotiations between the E3+3 and Iran, and as a sign of support, has to date contributed over £435,000 towards the IAEA's additional and intensive verification activities, and has committed a further £400,000 to support the Agency's work during the extension to the end of June 2015.

Global Partnership

69. The United Kingdom makes a major contribution to the G7 Global Partnership against the Spread of Materials and Weapons of Mass Destruction and in 2013 the United Kingdom held the Chair of the Global Partnership. Under the United Kingdom Chair, the Global Partnership established mechanisms to better match Global Partnership partners' funds and expertise with specific security requirements, and improve project coordination and implementation. We also held an outreach event with the experts of the Committee established pursuant to Security Council resolution 1540 (2004) to encourage universal reporting by States (in line with resolution obligations). From 2002-2012, the United Kingdom committed over £350 million of funding to Global Partnership projects.

70. The United Kingdom's largest contribution to the Global Partnership is through the Global Threat Reduction programme. We are working on Global Threat Reduction programmes that aim to:

- Improve the security of fissile materials
- Reduce the number of sites containing sensitive nuclear and radiological material and improve security of remaining sites
- Strengthen the security culture of sites and organizations dealing with sensitive nuclear and radiological material or information
- Help prevent the illicit trafficking of nuclear or radiological material
- Prevent terrorists acquiring proliferation-relevant information and expertise

Academic Technology Approval Scheme

71. In the United Kingdom, the Academic Technology Approval Scheme seeks to stop the spread of knowledge and skills from academic programmes that could be used in the proliferation of weapons of mass destruction and their means of delivery.

72. Academic institutions have a mandatory obligation to comply with United Kingdom visa requirements. Obtaining a certificate under the scheme is a requirement for all students applying for student visas and intending to enter or remain in the United Kingdom for more than six months to undertake post-graduate studies or research in certain designated subjects.

Reporting on national measures relating to the peaceful uses of nuclear energy

Promoting peaceful uses

73. The United Kingdom fully supports the inalienable right of all States parties to the peaceful uses of civil nuclear energy under the Treaty on the Non-Proliferation of Nuclear Weapons in a culture of openness, transparency and confidence and believes in the responsible, safe and secure access to civil nuclear energy worldwide, subject to the State being in conformity with the non-proliferation requirements of the Treaty.

74. We note the increasing demand for civil nuclear energy and stress its potential in addressing climate change and in providing energy security. Furthermore, we support the work of the IAEA in facilitating achievement of the Millennium Development Goals and sustainable development and in addressing vital non-power applications such as nuclear medicine, agriculture and industry.

Developments in civil nuclear energy

75. The United Kingdom recognizes the importance of civil nuclear energy, not least as civil nuclear power facilities need to sit alongside other low carbon forms of electricity generation. The United Kingdom has been clear that civil nuclear energy will be a key part of our future low carbon energy mix. It also offers us a cost-effective pathway to meet our legally binding carbon targets. The United Kingdom's commitment to civil nuclear power is evident in the steps which have been taken in the last year in relation to the new build programme in the United Kingdom. This is being done without subsidy from the Government, but work is being done to secure the long-term commercial investment needed.

Nuclear Industrial Strategy

76. The United Kingdom has taken several steps over the past year to continue our efforts in promoting peaceful uses of nuclear energy. We published the Nuclear Industrial Strategy in March 2013, which identified priorities for Government and industry to work together in a long-term partnership. It aims to provide more opportunities for economic growth and create jobs through an increased share of all aspects of the civil nuclear market. One of the main points in the strategy was the creation of the Nuclear Industry Council, which brings together all the key players across the civil nuclear supply chain. The Council will be looking at a number of issues essential to the success of our civil nuclear sector in the future: skills, trade and investment, business capability and how the public perceives the civil nuclear industry.

The Energy Act

77. The United Kingdom Government also recognizes the importance of an independent and robust regulatory regime and is committed to creating the highest standards of civil nuclear regulation. To that end, it has embarked on steps to enhance the United Kingdom's civil nuclear regulatory framework, to ensure it remains world class and has the flexibility to be able to address future challenges. The Energy Act, which gained Royal Assent in December 2013, includes provisions to establish the Office for Nuclear Regulation (created in 2011, as a statutory, independent regulator). The Office brings together the functions of civil nuclear safety, security, safeguards implementation, radioactive materials transport, and health and safety on civil nuclear sites. It began operating as a statutory body on 1 April 2014.

Memorandums of understanding

78. The United Kingdom Government is keen to enhance the links between the United Kingdom and other countries around the world with a view to enhancing civil nuclear energy cooperation. We made several high profile announcements in this regard last year. These include the signing of Memorandums of Understanding with various countries focusing on, inter alia, setting the strategic framework for collaboration on investment, technology, construction and expertise in civil nuclear energy, and exploring bilateral cooperation opportunities.

79. The United Kingdom Government has several mechanisms through which civil nuclear energy cooperation is enabled, including Nuclear Cooperation Agreements and Memorandums of Understanding. In addition to bilateral agreements, we are also party to Euratom cooperation agreements. Our activities in this area indicate a clear intent for the United Kingdom to work with various countries across a range of relevant civil nuclear energy-related activities, and we are in discussion with several other States regarding how civil nuclear energy cooperation can be enhanced bilaterally.

Nuclear fuel assurance

80. The United Kingdom fully supports moves to create a menu of viable and credible assurances of fuel supply, which would enable a new nuclear State to avoid the need to develop expensive and complex indigenous enrichment technologies. The United Kingdom's Nuclear Fuel Assurance proposal, a response to the IAEA's request for Multilateral Nuclear Approaches, was adopted at the IAEA Board of Governors in March 2011. This is one practical approach which ensures that States parties to the Treaty on the Non-Proliferation of Nuclear Weapons have access to the peaceful uses of civil nuclear energy, while upholding high standards of safety, security and non-proliferation. The United Kingdom views all Multilateral Nuclear Approaches proposals as complementary, and hopes that States are able to select proposals which contribute best to their energy mix.

Technical assistance through the IAEA to its member States

81. The United Kingdom is committed to supporting the IAEA's technical cooperation programme and demonstrates this by paying our contributions to the technical cooperation fund promptly and in full on an annual basis. We are involved in the ongoing discussions regarding the technical cooperation programme and are

keen to ensure that it continues to improve, fulfil its potential and provide the vital work that it undertakes.

82. The United Kingdom is very supportive of the contribution that the technical cooperation programme makes towards the Millennium Development Goals. The good work that the technical cooperation programme can achieve should not be underestimated and it has made numerous, positive contributions to the peaceful uses of nuclear-related technologies in many countries around the world.

83. The United Kingdom is encouraging the IAEA to continue to ensure results-based management and "sustainable" outcomes, accountability, transparency and synergies in the technical cooperation programme.

Nuclear safety and civil nuclear liability

84. The United Kingdom is a strong supporter of coordinated international efforts towards the continuous improvement of nuclear safety across the globe. As part of our commitment to achieving high nuclear safety standards the United Kingdom aims to show a leadership role in meeting its obligations as a Contracting Party to relevant international nuclear safety instruments such as the Convention on Nuclear Safety and the Joint Convention on the Safe Management of Spent Fuel and Radioactive Waste. In particular we are playing a leading role in proposing possible measures to strengthen the Convention on Nuclear Safety peer review processes.

85. Additionally, the United Kingdom has been a Contracting Party to the Paris Convention on nuclear third party liability and the Brussels Supplementary Convention since the 1960s. The Paris and Brussels Conventions were revised by amending Protocols in 2004. The United Kingdom is committed to implementing the changes and plans to lay legislation in 2015.

86. The United Kingdom actively encourages all States with civil nuclear programmes, or those thinking about developing one, to join a nuclear liability regime and to become Contracting Parties to the relevant international instruments and in particular the Convention on Nuclear Safety and the Joint Convention.

Other related issues

87. No additional material.